

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method for determining a repair solution for a memory module in a test system, the memory module comprising a plurality of word lines and a plurality of bits lines, the method comprising:

determining, for each memory area of the memory module, a defect datum;

generating defect addresses for all defective memory areas;

storing the defect addresses in the test system; and

selecting one or more replacement redundant groups based on the defect addresses stored in the test system, wherein the defect addresses are stored in a memory unit which includes, for each of a plurality of word line groups, a first memory segment having a first number of defect address memory locations for storing defect addresses in the respective word line group and, for each of a plurality of bit line groups, a second memory segment having a second number of defect address memory locations for storing defect addresses in the respective bit line group; wherein each word line group comprises one or more of the word lines and each bit line group comprises one or more of the bit lines.

2-3. (Cancelled)

4. (Previously Presented) The method of claim 1, wherein the first maximum number corresponds to available redundant bit line groups and the second maximum number corresponds to available redundant word line groups.

5. (Cancelled)

6. (Previously Presented) The method of claim 1, wherein each memory segment includes a replacement register for indicating an overflow condition of the memory segment, and wherein the evaluation unit unconditionally defines a redundant word line group as repair solution for the defective memory areas which can be addressed via a respective word line group if the replacement register for the first

memory segment indicates an overflow condition, and unconditionally defining a redundant bit line group as repair solution for the defective memory areas which can be addressed via a respective bit line group, if the replacement register for the second memory segment indicates an overflow condition.

7. (Currently Amended) A test device for determining a repair solution for a memory module comprising a plurality of word lines and a plurality of bits lines, the test device, comprising:

- a control unit for carrying out a test operation for memory areas in the memory module and determining defective memory areas;

- a memory unit for storing defect addresses of defective memory areas;

- a converter circuit for converting defect data corresponding to defect memory areas into defect addresses for storing in the memory unit; and

- an evaluation unit for selecting one or more replacement redundant groups based on the stored defect addresses, wherein the memory unit includes, for each of a plurality of word line groups, a first memory segment having a first number of defect address memory locations for storing the defect addresses in the respective word line group and, for each of a plurality of bit line groups, a second memory segment having a second number of defect address memory locations for storing the defect addresses in the respective bit line group; wherein each word line group comprises one or more of the word lines and each bit line group comprises one or more of the bit lines.

8. (Original) The test device of claim 7, wherein the evaluation unit selects the one or more replacement redundant groups from one or more redundant word line groups and one or more redundant bit line groups.

9. (Cancelled)

10. (Currently Amended) The test device of claim [[9]] 7, wherein the first number corresponds to available redundant bit line groups on the memory module and the second number corresponds to available redundant word line groups on the memory module.

11. (Currently Amended) The test device of claim [[9]] 7, wherein each memory segment includes a replacement register for indicating an overflow condition of the memory segment.

12. (Original) The test device of claim 11, wherein the evaluation unit unconditionally defines a redundant word line group as repair solution for the defective memory areas which can be addressed via a word line group if the replacement register for the first memory segment indicates an overflow condition, and unconditionally defining a redundant bit line group as repair solution for the defective memory areas which can be addressed via a bit line group, if the replacement register for the second memory segment indicates an overflow condition.

13. (Cancelled)

14. (Original) The test device of claim 7, further comprising:
a comparator circuit for comparing written data and read-out data to generate defect data.

15. (Currently Amended) A test system, comprising:
a connectable memory module comprising a plurality of word lines and a plurality of bits lines; and

a test device, connectable to the memory module, for determining a repair solution for the memory module, the test device comprising a control unit for carrying out a test operation for memory areas in the memory module and determining defective memory areas, a memory unit for storing defect addresses of defective memory areas, and an evaluation unit for selecting one or more replacement redundant groups based on the stored defect addresses wherein the memory unit includes, for each of a plurality of word line groups, a first memory segment having a first number of defect address memory locations for storing the defect addresses in the respective word line group and, for each of a plurality of bit line groups, a second memory segment having a second number of defect address memory locations for storing the defect addresses in the respective bit line group; wherein each word line group comprises one or more of the word lines and each bit line group comprises one or more of the bit lines.

16. (Original) The test system of claim 15, wherein the memory module includes a comparator circuit for comparing written data and read-out data to generate defect data.

17. (Original) The test system of claim 15, wherein the test device further comprises a comparator circuit for comparing written data and read-out data to generate defect data.

18. (Currently Amended) A method for determining a repair solution for a memory module in a test system, comprising:

generating defect addresses corresponding to all defective memory areas of the memory areas of the memory module, the memory module comprising a plurality of word lines and a plurality of bits lines;

storing the defect addresses in a memory unit in the test system, wherein the memory unit includes, for each of a plurality of word line groups, a first memory segment having a first number of defect address memory locations for storing the defect addresses in the respective word line group and, for each of a plurality of bit line group, a second memory segment having a second number of defect address memory locations for storing the defect addresses in the respective bit line group; wherein each word line group comprises one or more of the word lines and each bit line group comprises one or more of the bit lines; and

selecting one or more replacement redundant groups based on the defect addresses stored in the memory unit, wherein the evaluation unit selects the one or more replacement redundant groups from one or more redundant word line groups and one or more redundant bit line groups.

19. (Original) The method of claim 18, wherein the first number corresponds to available redundant bit line groups on the memory module and the second number corresponds to available redundant word line groups on the memory module.

20. (Original) The method of claim 18, wherein each memory segment includes a replacement register for indicating an overflow condition of the memory segment, and wherein the evaluation unit unconditionally defines a redundant word line group as

repair solution for the defective memory areas which can be addressed via a word line group if the replacement register for the first memory segment indicates an overflow condition, and unconditionally defining a redundant bit line group as repair solution for the defective memory areas which can be addressed via a bit line group, if the replacement register for the second memory segment indicates an overflow condition.

21. (Cancelled)

22. (Previously Presented) The method of claim 25, wherein the one or more replacement redundant groups are selected for all remaining defective memory areas that were not replaced by one of the redundant word line group and the redundant bit line group.

23. (Previously Presented) The test device of claim 12, wherein the evaluation unit selects the one or more replacement redundant groups for all remaining defective memory areas that were not replaced by one of the redundant word line group and the redundant bit line group.

24. (Previously Presented) The method of claim 18, wherein the one or more replacement redundant groups are selected for all remaining defective memory areas that were not replaced by one of the redundant word line group and the redundant bit line group.

25. (Previously Presented) The method of claim 1, wherein each memory area is addressable via a respective word line group or via a respective bit line group; and wherein the one or more replacement redundant groups are selected from a redundant word line group if the defective memory areas that are addressable by a common word line group exceeds a first maximum number and from a redundant bit line group if the defective memory areas that are addressable by a common bit line group exceeds a second maximum number.